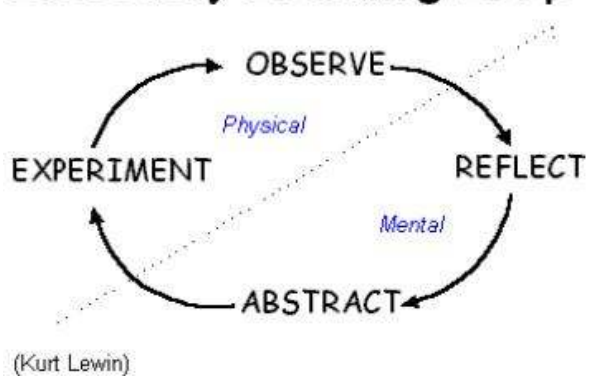
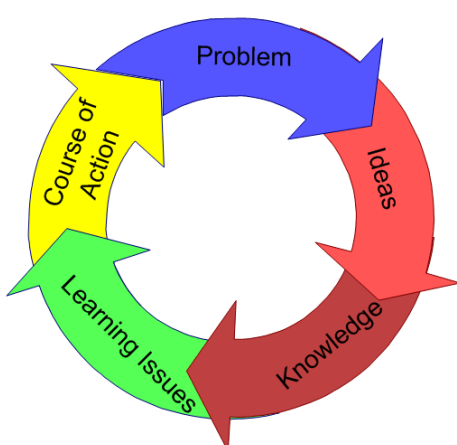


	Discover Learning	Problem-based Learning
	<p>Discovery Learning Loop</p>  <p>(Kurt Lewin)</p>	<p>Problem-Based Learning Process</p> 
Comparison Criteria	Model 1	Model 2
Relative “student-centeredness”	Fully student-centered, student makes important decisions in the learning process through personal “discoveries”, teacher supports students.	Fully student-centered, teacher acts as guide or facilitator.
Assessment	Authentic, performance based, peer and self-evaluation throughout process.	Authentic, performance based, peer and self-evaluation throughout process.
21st Century Skills	Higher-order thinking, creativity, technology use, collaboration, etc.	Higher-order thinking, creativity, technology use, collaboration, etc.
Ease of Use	Fairly easy. Strong planning by teacher, can be confusing for students if they lack the background knowledge or initial skills needed.	Fairly easy. Strong planning by teacher, front-loaded to allow for multiple solutions and avoid a problem that is too difficult.

Discovery Learning

Discovery learning is an inquiry-based method of instruction. Discovery learning emphasizes the importance of the student in guiding the learning process. The important concepts to be learned are discovered by the student rather than told or given to the student by the teacher. Students ask questions, observe, manipulate objects, struggle with controversies, and experiment to create their own understandings of the world around them. Discovery learning is often motivating for students since it gives them the opportunity to experiment and discover through their own personal decision making. Discovery learning builds upon students' prior knowledge and understanding so teachers may need to teach the skills and knowledge important to a specific learning task in order to create a successful learning experience. Discovery learning takes place within a problem solving context.

Problem-Based Learning

Problem-based learning is student-centered, constructivist learning model. Problem-based learning centers around a real-world or realistic problem presented to students. Students explore the problem, research, create new understandings, and find a solution to the problem. Teachers act as facilitators or guides in the learning process, providing scaffolding and support for students throughout the learning process. Teachers model for students and monitor their learning. The problems should allow for multiple solutions to a problem, guidelines may be presented, but students have the freedom to be creative which helps maximize learning. Students often collaborate with others to solve problems. Communication skills are developed through teamwork and the sharing of ideas with peers.

Comparison

Problem-based learning and discovery learning are very similar, student-centered learning models. Problem-based learning is actually one example of discovery learning. Both require students to actively engage with a problem or situation in order to create their own understanding and solve problem. Students drive the learning process. The two learning models also build on students' prior knowledge and emphasize the importance of the teacher as a facilitator/guide. Discovery learning is a more general approach to learning and instruction. Problem-based learning is more focused and falls within the discovery learning model.

Resources:

<http://carbon.ucdenver.edu/~mryder/itc/idmodels.html>

<http://www.ed.psu.edu/nasa/probtxt.html>

http://www.csd.uwa.edu.au/altmodes/to_delivery/discovery_learning.html

Images:

<http://www.renomodelpto.com>

<http://internettime.com/itimegroup/elearning/learning.htm>